

14. The bottom bracket of claim 13 in which at least one step is provided on the spindle as an inner stop element.

15. The bottom bracket of claim 13 in which stop rings are provided as outer stop elements.

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16. The bottom bracket of claim 13 in which said outer bracket portion consists of at least one adapter and a cylindrical sleeve, wherein said adapter and/or said sleeve provide shoulders to limit axial movement of said outer bearing races, and where gaps are provided between the axial end surfaces of said outer race and said shoulders that allow the outer races to move axially.

17. A bottom bracket assembly for a bicycle comprising a spindle rotatably held in an outer bracket portion with at least two cartridge bearings each including outer and inner races, where:

- a) the inner races of said cartridge bearings are fit onto said spindle and the outer races are fit into said outer bracket portion;
- b) both said inner races are fixed in both axial directions by abutting inner and outer stop elements provided on said spindle;
- c) the ends of said spindle comprise adapting portions to receive crank arms such that said crank arms abut against the outer stop elements in an axial direction;
- d) at least one of said outer races is mounted in said outer bracket portion such that it is free to move in both axial directions.

18. The bottom bracket of claim 17 in which at least one step is provided on the spindle as an inner stop element.

19. The bottom bracket of claim 17 in which stop rings are provided as outer stop elements.

20. The bottom bracket of claim 17 in which both outer races are free to move in both axial directions.

21. A bottom bracket assembly for a bicycle comprising a spindle rotatably held in an outer bracket portion by at least two cartridge bearings, each including inner and outer races, where:

- a) the inner races of said cartridge bearings are fit onto said spindle and the outer races of said cartridge bearings are fit into said outer bracket portion;
- b) at least one of said outer races is mounted in said outer bracket portion such that it is free to move in both axial directions;
- c) said spindle includes at least one inner stop element that abuts against both of said inner races in one axial direction, and other outer stop elements are provided that abut against both of said inner races in the other axial direction, such that both of said inner races are fixed on said spindle in both axial directions;

d) the ends of said spindle comprise adapting portions to receive crank arms such that said crank arms abut against the outer stop elements in an axial direction.

22. A bicycle with two crank arms and attached pedals in which:

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- a) said crank arms are connected to a spindle arranged rotatably in a bottom bracket;
 - b) said bottom bracket comprises an outer bracket portion and at least two cartridge bearings, each including inner and outer races;
 - c) the inner races of said cartridge bearings are fit onto said spindle and the outer races are fit into said outer bracket portion;
 - d) said spindle includes at least one inner stop element which abuts against both of said inner races in one axial direction, and there are outer stop elements provided which abut against both of said inner races in the other axial direction, such that both of said inner races are fixed on said spindle in both axial directions;
 - e) the ends of said spindle comprise adapting portions to receive said crank arms such that said crank arms abut against the outer stop elements in an axial direction.

GENERAL REMARKS

The Applicant has rewritten all claims to define the invention more particularly and distinctly so as to overcome the Examiner's rejection under 35 U.S.C. 103(a) as discussed below.